

**Abstract**

[0043] The present invention provides a method and an apparatus for color calibration for calibrating an input color. A target color represented by a first coordinate pair ( $X_1$ ,  $Y_1$ ). An input color, which is going to be calibrated, is represented by a second coordinate pair ( $X_2$ ,  $Y_2$ ) and can be adjusted with a saturation parameter  $P_b$  and a chrominance parameter  $P_r$ . The first coordinate pair ( $X_1$ ,  $Y_1$ ) and the second coordinate pair ( $X_2$ ,  $Y_2$ ) are compared to obtain a state. In response to the state,  $P_b$  and  $P_r$  are adjusted until the second coordinate pair is equal to the first coordinate pair. Therefore, the input color is calibrated to match the target color.